



Pacific Northwest Consortium CAT

Overview

The Pacific Northwestern Consortium CAT (PNC-CAT) includes a number of institutions in the Pacific Northwest regions of both the United States and Canada. Scientists from the lead institutions of the University of Washington, Pacific Northwest National Laboratories, and Simon Fraser University share several common research goals: specifically, a basic understanding of materials as related to their physical and chemical properties, the development of new strategies for environmental cleanup based on a fundamental understanding of the interaction of pollutants with the ambient environs, and structure-function properties of macromolecules.

Research Focus

Several innovative instruments, including an analytical x-ray microscope with submicron resolution and capability to measure diffraction, x-ray absorption fine structure (XAFS), and diffraction anomalous fine structure (DAFS), will enable investigators to characterize heterogeneous materials in new ways. These measurements can be combined with two- and three-dimensional imaging using absorption and phase contrast. UHV and MBE facilities are available for *in situ* investigations using surface diffraction and XAFS. Capabilities for time-resolved measurements in the subnanosecond scale are being developed. These techniques and instruments will be used to investigate materials science and environmental problems, on both a fundamental and applied level.

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